

Claims:

1. A method of processing a legume fodder crop (as hereinbefore defined), including the steps of:
 - (a) delivering with minimum delay, freshly harvested legume fodder crop to a feed mill located at/adjacent to a cane sugar mill;
 - (b) processing the crop to seek optimised cell breakage and/or fiberisation (separation of fibre particles) in the resultant shredded material, depending on final product specifications as required; and
 - (c) drying the shredded material using heat supplied by the cane sugar mill or from by-products of the cane sugar mill to produce a dried animal feed material, suitable for long term storage.
2. A method as claimed in claim 1, including the further step:
 - (d) mixing the dried material with suitable liquid binder(s) to produce a feed meal material of suitable moisture content as required for use.
3. A method as claimed in claim 1 or claim 2, wherein:
in step (a), the freshly harvested crop is delivered to the feed mill in bulk using a transport system/infrastructure of the cane sugar mill.
4. A method as claimed in claim 1 or claim 2, wherein:
in step (b), the harvested crop is shredded using heavy duty shredder/hammermill machines.
5. A method as claimed in claim 1 or claim 2, wherein:
in step (b), the juice is extracted, concentrated, and stored in liquid concentrate tank(s).
6. A method as claimed in claim 1 or claim 2, wherein:

in step (c), the shredded matter is dried using hot flue gas from the sugar mill boiler, or from a separate furnace fired with sugar cane bagasse either fresh from the cane sugar mill or from a stockpile.

7. A method as claimed in claim 6, wherein:

5 the dried shredded material is separated into coarse (stem) and fine (leaf) dry fibre fractions, which are optionally selectively recombined during later processing.

8. A method as claimed in claim 2, wherein:

10 in step (d), the liquid binder(s) include molasses, juice concentrate and other suitable liquids to achieve the desired moisture content.

9. A method as claimed in claim 2 or claim 8, wherein:

15 during, or after, step (d) other ingredients and additives, including vitamins, minerals, digestion improvers, antibiotics and other pharmaceuticals are added to increase the value of the feed meal material.

10. A method as claimed in claim 2, claim 8 or claim 9, wherein:
after step (d), the feed meal material undergoes further processing such as pelletising, crumbling, granulation, agglomeration, pressure compaction, cubing, extrusion, moulding, tableting, briquetting, baling or bagging to suit
20 the market requirements.

11. A method of processing a legume fodder crop (as hereinbefore defined) including the steps of:

(a) delivering with minimum delay, freshly harvested legume fodder crop to a feed mill located at/adjacent to a cane sugar mill;

(b) processing the crop to produce cut and/or shredded material; and

(c) drying the cut and/or shredded material using heat supplied by the cane sugar mill or from by-products of the cane sugar mill to
5 produce a dried animal feed material, suitable for long term storage.

12. A method as claimed in claim 11, including the further step:

(d) baling the dried cut and/or shredded material (or hay).

13. A method as claimed in claim 11 or claim 12, wherein:

in step (b), the crop is processed using rotary knives to cut
10 and/or shred the fibrous material.

14. A method as claimed in claim 12, wherein:

after step (d), the baled material (or hay) is outloaded or containerised for transport.

15. A method as claimed in any one of claims 11 to 14, wherein:

at step (d), molasses is mixed with the dried material (or hay) to
15 increase the nutritional value thereof.

16. A method of producing an animal feed product including the steps of:

(i) growing a legume fodder crop (as hereinbefore defined)
20 as a soil-enhancing fallow crop for sugar cane;

(ii) harvesting the crop;

(iii) delivering with minimum delay, freshly harvested crop to a feed mill located at/adjacent to a cane sugar mill;

(iv) processing the crop to seek optimised cell breakage

and/or fiberisation (i.e., separation of fibre particles) in the resultant shredded material, depending on final product specifications as required; and

- (v) drying the shredded material using heat supplied by the cane sugar mill or from by-products of the cane sugar mill to produce an animal feed material.

17. A method as claimed in claim 16, including the further step:

(vi) mixing the dried material with suitable liquid binder(s) to produce a feed meal material of suitable moisture content if required for use.

18. A method for producing an animal feed product including the steps of:

(i) growing a legume fodder crop (as hereinbefore defined) as a soil-enhancing fallow crop for sugar cane;

(ii) harvesting the crop;

(iii) delivering with minimum delay, freshly harvested crop to a feed mill located at/adjacent a cane sugar mill;

(iv) processing the crop to produce cut and/or shredded material; and

(v) drying the cut and/or shredded material using heat supplied by the cane sugar mill or from by-products of the cane sugar mill to produce an animal feed material.

19. A method as claimed in claim 18, including the further step:

(vi) baling the dried cut and/or shredded material (or hay).

20. A method for producing an animal feed product including the steps of:

(i) growing a legume fodder crop (as hereinbefore defined)
as a soil-enhancing fallow crop for sugar cane;

(ii) harvesting the crop; and

(iii) processing the crop by the method claimed in any one of

5 claims 1 to 15.